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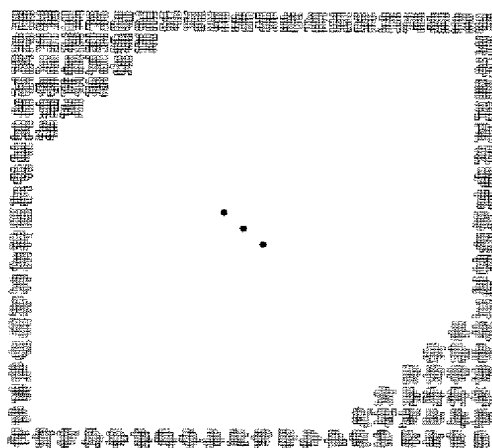
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- (71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12FL, Oakland, CA 94607-5700 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MERRIMAN, Barry** [US/US]; Los Angeles, CA (US). **CHEN, Zugen** [US/US]; Los Angeles, CA (US). **KIM, Chang-Jin** [US/US]; California (US). **NELSON, Stanley** [US/US]; California (US). **TSAL, Jane, Gin-Fai** [US/US]; California (US).
- (74) Agents: **GREENBERG TRAURIG, LLP** et al.; Suite 400 E, 2450 Colorado Avenue, Santa Monica, CA 90404 (US).
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(54) Title: TRACERS AND ASSEMBLY FOR LABELING CHEMICAL OR BIOLOGICAL MOLECULES METHODS AND KITS USING THE SAME



(57) Abstract: An improved process to create an arbitrarily large number of distinguishable particles allows more flexibility in experimental design and related efficiencies of scale. Novel enhanced tracers, for example, Shape Encoded Particles (SEP's) function as indicator means, such as probe-carriers in massively multiplexed assays. Shape encoded identity provides an elegantly simple tracking mechanism, whereby binding/reaction probes coupled to SEP's surfaces can be monitored, viewed, imaged or otherwise utilized leveraging off of the generation of millions of distinct, for example, approximately 100x100x10 micron squared silicon flakes fabricated using conventional MEMS techniques. Plethora related applications, and contemplated strategies for benefiting from the novel enhanced SEP's and their respective enabling technologies are disclosed, ranging from pearl culturing seed elements to uniquely identify resulting jewelry pieces to an improved parallel stem cell differentiation screening assay.

WO 2005/074569 A2

WO 2005/074569 A2



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